

TEST FOR INDENTATION AND RECOVERY

Application

This method is used to determine the recovery after indentation of foam safety padding such as crash pads, arm rests, and other integrally molded components and assemblies.

Apparatus Required

Tensile Tester

With a compression loading device capable of applying a load of 22.7 kg at a rate of 305 mm per minute and holding a position for 2 minutes.

Indenter and Fixture

Refer to Figure 1. Diameter A of the rod shall be selected to fit the contour of the nose of the crash pad. Other fixtures may be used if the crash pad is adequately supported in the area of the test.

Compression Apparatus

A force gage or equivalent apparatus capable of applying a load of 6.8 kg.

Indenter Head

Typically a steel indenter of approximately 38 mm in length with a 7.5 mm spherical radius. Shown in Figure 2.

Conditioning and Test Conditions

All test values indicated herein are based on material conditioned in a controlled atmosphere of 23 +/- 2 °C and 50 +/- 5 % relative humidity for not less than 24 h prior to testing and tested under the same conditions unless otherwise specified.

Procedure

Method A - Crash Pads

1. Position the finished component or cut specimen 500 mm minimum in length on the test fixture in such a position that the area to be tested is directly under the indenter. Ensure that the plane of the area to be tested is at right angles to the direction of indentation.

Date	Action	Revisions
2001 03 28	Revised	Editorial – no technical change A. Cockman
1991 02 14		

Printed copies are uncontrolled

Page 1 of 4

Copyright © 2001, Ford Global Technologies, Inc.

2. Apply a load of 22.7 kg at a rate of 305 mm per minute. Stop the machine and allow to stand for 2 minutes (a load loss will occur).
3. Observe and report any failure of the crash pad to fully recover within 30 minutes. Discount any minor wrinkles.
4. After testing, place the pad in a freezer at - 23 °C for 4 hours. Remove the pad and repeat the indentation test within 2 minutes.

Method B - Armrests and Other Integrally Molded Assemblies

1. Place the indenter head against an area of the assembly subject to deformation by installation procedures or in service. See Figure 2.
2. Apply and remove a 6.8 Kg load within 3 seconds time.
3. Observe and report any failure of the assembly to fully recover within 5 minutes.

Chemicals, materials, parts, and equipment referenced in this document must be used and handled properly. Each party is responsible for determining proper use and handling in its facilities.